demonstrate how complex such devices can get, particularly if they have to be accommodated in the confined space available in an analyzer system. It is therefore preferred if the lid-holder device has an electromagnet whose excitation current can be turned on and off by a switch.

The magnet in the lid-holder device could for example be designed to be switchable between two operating modes, so that the lid would be attracted in one operating mode to uncover the sample and repelled in a second operating mode to cover the sample again. This would however require an expensive switching arrangement and reversible electromagnets. In comparison, the lid-holder device will be less complicated if the electromagnet has a core of soft iron, so that the remanent magnetization is insignificant after the excitation current has been turned off and the lid is simply released by the magnet.

In principle, a single magnet pole would be sufficient to attract the lid. However, the hold on the lid will be particularly secure if the electromagnet is configured with a yoke, i.e., a U-shaped core with the two poles facing the lid, because this arrangement allows the magnetic flux to run in a closed circle with the lid making the connection from one pole to the other.

A magnet can be used in various different ways in the lid-opening/holding device. For example, the magnet could be moved towards the lid, so as to move the lid sideways, or to lift the lid, or to turn up a hinged lid in order to open the

sample container. However, a less complicated design is achieved if the electromagnet is arranged at a stationary location above the sample track and at an appropriate height to allow the sample to pass below the magnet, so that the latter simply lifts the lid off the sample.

In order to prevent a situation where the movement of samples could be obstructed because two lids are caught in a position on top of each other as a result of a malfunction (failure to lift off the lid, or current failure in the electromagnet), the arrangement of the lid-opening device, specifically of the electromagnet, is designed with a clear distance of at least twice the lid thickness above the height of a lid-covered sample. This also provides a good level of safety, so that a possible remanent magnetization will not accidentally open a lid, as could occur if the electromagnet and the lid came too close to each other.

In order to allow existing analyzer systems to be modified or retrofitted, it is preferred if the lid-opening device can be mounted on the base housing with a non-destructively releasable mounting arrangement consisting of at least two parts.

It is assumed to be advantageous if the drive mechanism is designed as a rotary drive mechanism for a disk-shaped sample tray, so that the samples move along a circular path, adjacent to which the lid-opening device is installed.

Especially in the latter case (but also with a linear movement of the samples, which is not excluded under the

invention) it is advantageous if the sample movement in the analyzer system is run by a program-operated controller unit, where the program includes the actuating steps of a lid-opening/holding device so that lids that may be used on the samples can be taken off and held during the time in which the sample is analyzed, whereupon the device will put the lid back on the sample. With this arrangement, it is practical to design the program so that after removing the lid, the sample is moved to the analyzer module, and following the analysis of the sample, the latter is moved back to the lid-opening/holding device in order to put the lid back on.

An analyzer system according to the invention can be populated with samples with and without a lid for the simple reason that if a sample has no lid, the electromagnet will have nothing to pick up. As another possibility, conditioning vessels could be placed between some or all of the samples, e.g., for the conditioning of the analytical electrodes, or as rinsing/washing containers for the cleaning of analytical devices (pipettes, electrodes, suction orifices, etc.). As a simple way of entering a signal into the analyzer system when a container is not a sample container, it is advantageous if the control arrangement for moving the samples includes at least one sensor mark on the sample tray of the analyzer system and at least one stationary reader device for the sensor mark. The reader device may be installed on the base housing and/or on the analyzer module. Providing a sensor mark and a reader device